The Neglected Role of *Trichomonas tenax* in Oral Diseases: A Systematic Review and Meta-analysis

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Abstract

Purpose

Trichomonas tenax (*T. tenax*) is a commensal flagellated protozoan found in periodontal microenvironment of the oral cavity, with a possible role in periodontal diseases. The purpose of the present systematic review and meta-analysis was to determine the worldwide prevalence of *T. tenax* infection and to show the neglected association of this parasitic infection with oral diseases.

Methods

To find literatures published until August 2020, five English databases (PubMed, Scopus, Science Direct, Web of Science and Google Scholar) were explored. Finally, 65 papers were qualified to be included in the current study.

Results

Our results revealed a global pooled prevalence of 17% (95% CI 14–22%) for *T. tenax* infection. The highest prevalence was estimated at 56% (42–69%) in Chile, while the lowest prevalence was related to Kenya with 3% (1–6%). The age-based analysis found that the infection was most common in 46–55 mean age group with 15% (0–100%). The overall prevalence regarding culture method, molecular method and direct method was 21% (12–32%), 19% (8–35%) and 17% (12–23%), respectively. Moreover, the subgroup analysis showed the pooled prevalence in patient with candidiasis [22% (3–52%)], gingivitis [21% (9–36%)] and periodontitis [27% (10–48%)].

Conclusion

Our study specified a connection between *T. tenax* protozoa and periodontitis disease. However, more epidemiological studies as well as clinical trials are needed to precisely identify this relation.